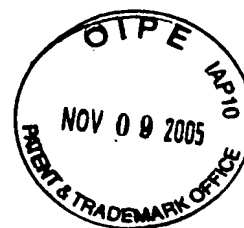


## SEQUENCE LISTING



<110> CHEN, WEN Y.  
WAGNER, THOMAS E.

<120> BI-FUNCTIONAL CANCER TREATMENT AGENTS

<130> 035879/0120

<140> 09/815,306

<141> 2001-03-23

<150> 60/191,457

<151> 2000-03-23

<160> 34

<170> PatentIn Ver. 3.3

<210> 1

<211> 227

<212> PRT

<213> Homo sapiens

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Val	Ser	Asn	Leu	Leu	Leu	Cys	Gln	Ser	Val	Ala	Pro	Leu	Pro	Ile	Cys	
			20					25					30			
Pro	Gly	Gly	Ala	Ala	Arg	Cys	Gln	Val	Thr	Leu	Arg	Asp	Leu	Phe	Asp	
			35				40					45				
Arg	Ala	Val	Val	Leu	Ser	His	Tyr	Ile	His	Asn	Leu	Ser	Ser	Glu	Met	
			50			55					60					
Phe	Ser	Glu	Phe	Asp	Lys	Arg	Tyr	Thr	His	Gly	Arg	Gly	Phe	Ile	Thr	
65					70					75					80	
Lys	Ala	Ile	Asn	Ser	Cys	His	Thr	Ser	Ser	Leu	Ala	Thr	Pro	Glu	Asp	
				85					90					95		
Lys	Glu	Gln	Ala	Gln	Gln	Met	Asn	Gln	Lys	Asp	Phe	Leu	Ser	Leu	Ile	
			100					105					110			
Val	Ser	Ile	Leu	Arg	Ser	Trp	Asn	Glu	Pro	Leu	Tyr	His	Leu	Val	Thr	
			115				120					125				
Glu	Val	Arg	Gly	Met	Gln	Glu	Ala	Pro	Glu	Ala	Ile	Leu	Ser	Lys	Ala	
			130			135					140					
Val	Glu	Ile	Glu	Glu	Gln	Thr	Lys	Arg	Leu	Leu	Glu	Gly	Met	Glu	Leu	
145					150					155					160	
Ile	Val	Ser	Gln	Val	His	Pro	Glu	Thr	Lys	Glu	Asn	Glu	Ile	Tyr	Pro	
				165					170						175	

Val Trp Ser Gly Leu Pro Ser Leu Gln Met Ala Asp Glu Glu Ser Arg  
                   180                  185                  190

Leu Ser Ala Tyr Tyr Asn Leu Leu His Cys Leu Arg Arg Asp Ser His  
                   195                  200                  205

Lys Ile Asp Asn Tyr Leu Lys Leu Leu Lys Cys Arg Ile Ile His Asn  
                   210                  215                  220

Asn Asn Cys  
 225

<210> 2  
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 <212> PRT  
 <213> Homo sapiens

<400> 2  
 Ile Glu Glu Gln Thr Lys Arg Leu Leu Arg Gly Met Glu Leu Ile Val  
           1                  5                  10                  15

Ser Gln Val His Pro  
                   20

<210> 3  
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 <212> PRT  
 <213> Rattus sp.

<400> 3  
 Ile Glu Glu Gln Asn Lys Arg Leu Leu Glu Gly Ile Glu Lys Ile Ile  
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Gly Gln Ala Tyr Pro  
                   20

<210> 4  
 <211> 21  
 <212> PRT  
 <213> Mus sp.

<400> 4  
 Ile Glu Glu Gln Asn Lys Gln Leu Leu Glu Gly Val Glu Lys Ile Ile  
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Ser Gln Ala Tyr Pro  
                   20

<210> 5  
 <211> 21  
 <212> PRT  
 <213> Cricetus sp.

&lt;400&gt; 5

Ile Gly Glu Gln Asn Lys Arg Leu Leu Glu Gly Ile Glu Lys Ile Leu  
 1 5 10 15

Gly Gln Ala Tyr Pro  
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&lt;210&gt; 6

&lt;211&gt; 21

&lt;212&gt; PRT

&lt;213&gt; Cetacea sp.

&lt;400&gt; 6

Glu Glu Glu Glu Asn Lys Arg Leu Leu Glu Gly Met Glu Lys Ile Val  
 1 5 10 15

Gly Gln Val His Pro  
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&lt;210&gt; 7

&lt;211&gt; 21

&lt;212&gt; PRT

&lt;213&gt; Mustela sp.

&lt;400&gt; 7

Ile Glu Glu Glu Asn Arg Arg Leu Leu Glu Gly Met Glu Lys Ile Val  
 1 5 10 15

Gly Gln Val His Pro  
 20

&lt;210&gt; 8

&lt;211&gt; 21

&lt;212&gt; PRT

&lt;213&gt; Bos sp.

&lt;400&gt; 8

Ile Glu Glu Gln Asn Lys Arg Leu Ile Glu Gly Met Glu Met Ile Phe  
 1 5 10 15

Gly Gln Val Ile Pro  
 20

&lt;210&gt; 9

&lt;211&gt; 21

&lt;212&gt; PRT

&lt;213&gt; Ovis sp.

&lt;400&gt; 9

Glu Glu Glu Glu Asn Lys Arg Leu Leu Glu Gly Met Glu Asn Ile Phe  
 1 5 10 15

Gly Gln Val Ile Pro  
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<210> 10  
 <211> 21  
 <212> PRT  
 <213> Porcine sp.

<400> 10  
 Ile Glu Glu Gln Asn Lys Arg Leu Leu Glu Gly Met Glu Lys Ile Val  
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 Gly Gln Val His Pro  
                   20

<210> 11  
 <211> 21  
 <212> PRT  
 <213> Camelus sp.

<400> 11  
 Ile Glu Glu Gln Asn Lys Arg Leu Leu Glu Gly Met Glu Lys Ile Val  
           1                  5                  10                  15  
 Gly Gln Val His Pro  
                   20

<210> 12  
 <211> 21  
 <212> PRT  
 <213> Equus caballus

<400> 12  
 Glu Ile Glu Gln Asn Arg Arg Leu Leu Glu Gly Met Glu Lys Ile Val  
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 Gly Gln Val Gln Pro  
                   20

<210> 13  
 <211> 21  
 <212> PRT  
 <213> Elephantus sp.

<400> 13  
 Val Lys Glu Glu Asn Gln Arg Leu Leu Glu Gly Ile Glu Lys Ile Val  
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 Asp Gln Val His Pro  
                   20

<210> 14  
 <211> 21  
 <212> PRT  
 <213> Unknown Organism

<220>

<223> Description of Unknown Organism: Ancestral mammal

<400> 14

Ile Glu Glu Glu Asn Lys Arg Leu Leu Glu Gly Met Glu Lys Ile Val  
1 5 10 15

Gly Gln Val His Pro  
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<210> 15

<211> 21

<212> PRT

<213> Gallus sp.

<400> 15

Ile Glu Glu Gln Asn Lys Arg Leu Leu Glu Gly Met Glu Lys Ile Val  
1 5 10 15

Gly Arg Val His Ser  
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<210> 16

<211> 21

<212> PRT

<213> Meleagris gallopavo

<400> 16

Ile Glu Glu Gln Asp Lys Arg Leu Leu Glu Gly Met Glu Lys Ile Val  
1 5 10 15

Gly Arg Ile His Ser  
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<210> 17

<211> 21

<212> PRT

<213> Turtur sp.

<400> 17

Ile Glu Glu Gln Asn Lys Arg Leu Leu Glu Gly Met Glu Lys Ile Val  
1 5 10 15

Gly Gln Val His Pro  
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<210> 18

<211> 21

<212> PRT

<213> Crocodilus sp.

&lt;400&gt; 18

Ile Glu Glu Gln Asn Lys Arg Leu Leu Glu Gly Met Glu Lys Ile Ile  
 1 5 10 15

Gly Arg Val Gln Pro  
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&lt;210&gt; 19

&lt;211&gt; 21

&lt;212&gt; PRT

&lt;213&gt; Lacerta sp.

&lt;400&gt; 19

Ile Glu Glu Gln Asn Lys Arg Leu Leu Glu Gly Met Glu Lys Val Ile  
 1 5 10 15

Gly Arg Val Gln Pro  
 20

&lt;210&gt; 20

&lt;211&gt; 21

&lt;212&gt; PRT

&lt;213&gt; Unknown Organism

&lt;220&gt;

&lt;223&gt; Description of Unknown Organism: Ancestral amniote

&lt;400&gt; 20

Ile Glu Glu Gln Asn Lys Arg Leu Leu Glu Gly Met Glu Lys Ile Val  
 1 5 10 15

Gly Gln Val His Pro  
 20

&lt;210&gt; 21

&lt;211&gt; 21

&lt;212&gt; PRT

&lt;213&gt; Xenopus sp.

&lt;400&gt; 21

Val Glu Glu Gln Asn Lys Arg Leu Leu Glu Gly Met Glu Lys Ile Val  
 1 5 10 15

Gly Arg Ile His Pro  
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&lt;210&gt; 22

&lt;211&gt; 21

&lt;212&gt; PRT

&lt;213&gt; Rana catesbeiana

&lt;400&gt; 22

Val Glu Glu Gln Thr Lys Arg Leu Leu Glu Gly Met Glu Arg Ile Ile  
 1 5 10 15

Gly Arg Ile Gln Pro  
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<210> 23  
<211> 21  
<212> PRT  
<213> Dipnoi sp.

<400> 23  
Val Glu Asp Gln Thr Lys Gln Leu Ile Glu Gly Met Glu Lys Ile Leu  
1 5 10 15

Ser Arg Met His Pro  
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<210> 24  
<211> 21  
<212> PRT  
<213> Unknown Organism

<220>  
<223> Description of Unknown Organism: Tilapia

<400> 24  
Met Gln Gln Tyr Ser Lys Ser Leu Lys Asp Gly Leu Asp Val Leu Ser  
1 5 10 15

Ser Lys Met Gly Ser  
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<210> 25  
<211> 21  
<212> PRT  
<213> Unknown Organism

<220>  
<223> Description of Unknown Organism: Tilapia

<400> 25  
Met Gln Glu His Ser Lys Asp Leu Lys Asp Gly Leu Asp Ile Leu Ser  
1 5 10 15

Ser Lys Met Gly Pro  
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<210> 26  
<211> 21  
<212> PRT  
<213> Cyprinus carpio

<400> 26  
Leu Gln Glu Asn Ile Asn Ser Leu Gly Ala Gly Leu Glu His Val Phe  
1 5 10 15

Asn Lys Met Asp Ser  
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<210> 27  
<211> 21  
<212> PRT  
<213> *Cyprinus carpio*

<400> 27  
Leu Gln Asp Asn Ile Asn Ser Leu Gly Ala Gly Leu Glu Arg Val Val  
1 5 10 15

His Lys Met Gly Ser  
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<210> 28  
<211> 21  
<212> PRT  
<213> *Cyprinus carpio*

<400> 28  
Leu Gln Asp Asn Ile Asn Ser Leu Val Pro Gly Leu Glu His Val Val  
1 5 10 15

His Lys Met Gly Ser  
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<210> 29  
<211> 21  
<212> PRT  
<213> *Salmonis sp.*

<400> 29  
Leu Gln Asp Tyr Ser Lys Ser Leu Gly Asp Gly Leu Asp Ile Met Val  
1 5 10 15

Asn Lys Met Gly Pro  
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<210> 30  
<211> 21  
<212> PRT  
<213> *Oncorhynchus tshawytscha*

<400> 30  
Leu Gln Asp Tyr Ser Lys Ser Leu Gly Asp Gly Leu Asp Ile Met Val  
1 5 10 15

Asn Lys Met Gly Pro  
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<210> 31  
 <211> 21  
 <212> PRT  
 <213> Tructa sp.

<400> 31  
 Leu Gln Asp Tyr Ser Lys Ser Leu Gly Asp Gly Leu Asp Ile Met Val  
   1                  5                  10                  15  
 Asn Lys Met Gly Pro  
                   20

<210> 32  
 <211> 22  
 <212> PRT  
 <213> Homo sapiens

<400> 32  
 Val Tyr Asp Leu Leu Lys Asp Leu Glu Glu Gly Ile Gln Thr Leu Met  
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 Arg Glu Leu Glu Asp Gly  
                   20

<210> 33  
 <211> 22  
 <212> PRT  
 <213> Bovine sp.

<400> 33  
 Val Tyr Glu Lys Leu Lys Asp Leu Glu Glu Gly Ile Leu Ala Leu Met  
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 Arg Glu Leu Glu Asp Gly  
                   20

<210> 34  
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 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
       amino acid sequence

<400> 34  
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 Asp Leu Phe Asp Arg Ala Val Val Leu Ser His Tyr Ile His Asn Leu  
           20                  25                  30  
 Ser Ser Glu Met Phe Ser Glu Phe Asp Lys Arg Tyr Thr His Gly Arg  
       35                  40                  45

